Mammoth Bar Off-Highway Vehicle Area

Wildlife Habitat Protection Plan

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Off-Highway Motor Vehicle Recreation Division

August 17, 2000

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Introduction

This document describes the wildlife habitat protection program for the Mammoth Bar Off-Highway Vehicle Area (Mammoth Bar OHVA), as required by Public Resources Code (PRC) section 5090.35

Location

Mammoth Bar Off-Highway Motor Vehicle Area (OHVA) is approximately 750-acres and is located on the north side of the Middle Fork American River in Placer County, approximately 2.5 miles east of Auburn. Elevations range from 600 to 1,536 feet.

Administrative Responsibilities

Mammoth Bar OHVA is located in the Auburn State Recreation Area on federal land administered by the U.S. Bureau of Reclamation. Mammoth Bar is managed by the Department of Parks and Recreation (DPR) under a 1977 management agreement.

Previous and Current Use

In the early 1980s, there were an estimated 35 miles of unmanaged trails in Mammoth Bar OHVA. DPR closed and rehabilitated trails and currently allows recreation use on approximately 14 miles of trails and two moto-cross tracks. In 1999, annual visitation of approximately 28,700 OHV enthusiasts used Mammoth Bar OHVA. The area is also used by an unknown number of hikers, mountain bikers, and river rafters. Currently, OHV use is permitted only on designated trails to reduce disturbance to natural resources, is restricted to daylight hours when personnel are available for patrol, and the OHV park and trails are closed temporarily during wet weather to prevent trail damage and reduce soil erosion.

Plan Objectives

The objectives of this plan are two-fold:

1. Maintain current wildlife populations and their habitats, accomplished as follows:
    a. conducting a baseline inventory of species and habitats,
    b. monitoring species and habitats, and
    c. managing to sustain a viable species composition through an adaptive process.

2. Soil conservation as follow:,
    a. conducting a baseline soil inventory,
    b. monitoring soils using Soil Conservation Guidelines and Standards for OHV Recreation Management, and
    c. managing OHV activity considering soil conditions.

This plan will summarize current knowledge and recommend and define management practices, which will protect and maintain, wildlife and habitats within the Mammoth Bar OHVA. This plan is meant to be used in an adaptive manner. As new ecological conditions arise or new data becomes available, management practices will adapt. This process is one of learning, where incorporated changes are monitored and evaluated. The Resource Ecologist will identify and monitor species of special status (i. e., Threatened and Endangered species, and species of special concern), as well as identify factors that may contribute to the overall ecological health of the habitats within Mammoth Bar OHVA.

Plan Review Process

To facilitate the adaptive process, this plan will be reviewed annually by the Off-Highway Motor Vehicle Recreation Division's Resource Team, for their recommendations to the American River District Division Management Team and Superintendent. The American River District Division Management Team will revise the plan annually as a result of the data collected and the suggestions of the team. The plan will also be reviewed every five years by a team of resource and wildlife professionals outside the Division. Management of the area will be reviewed with input from the Resource Ecologist.

Surveys and Inventories

An initial inventory of wildlife populations and their habitats was conducted in 1999 (Jones and Stokes 2000). The existing habitats and habitats for special status species were mapped. More intensive surveys for sensitive species and species not detected in the initial survey, will be conducted in the following year. In addition, soils were

surveyed and mapped on and off the trails areas with sensitive soil conditions and highly erodeable soils were located. Six main habitat types were identified:

Blue Oak/Foothill Pine Woodland

Blue oak/foothill pine woodlands in Mammoth Bar OHVA appear to provide high-quality habitat for many wildlife species. Acorns from the oaks are an important food resource for many wildlife species, including wild turkeys, California quail, acorn woodpeckers, white-breasted nuthatches, oak titmice, western scrub jays, black bears, black-tailed deer, western gray squirrels, and California ground squirrels. Oak trees, especially blue oaks, also provide nest sites for squirrels and cavity-nesting birds, including ash-throated flycatchers, western bluebirds, woodpeckers, nuthatches, and titmice. Other wildlife species observed in the woodlands at Mammoth Bar OHVA include Pacific-slope flycatchers, Bullock's orioles, lesser goldfinches, Bewick's wrens, and red-tailed hawks.

Annual Grassland

Annual grasslands in the study area provide breeding and foraging habitat and cover for many species observed using these grasslands including wild turkeys, California quail, mourning doves, red-tailed hawks, barn swallows, California towhees, lesser goldfinches, house finches, western meadowlarks, coyotes, gray foxes, Botta's pocket gophers, California ground squirrels, black-tailed deer, and western fence lizards.

Chaparral

Chaparral provides cover for several common shrub-dependent wildlife species, including California quail, wrentits, spotted towhees, and California towhees. Other wildlife species observed in the chaparral include Bewick's wrens, bushtits, Anna's hummingbirds, black-tailed deer, Botta's pocket gophers, gopher snakes, and coyotes.

Valley and Foothill Riparian Habitat

The riparian habitat appears to support only limited numbers of riparian-dependent wildlife, perhaps, because the vegetation is narrow and patchy. However, the vegetation does provide cover and foraging habitat for a variety of wildlife species, including belted kingfishers, downy woodpeckers, Anna's hummingbirds, bushtits, Townsend's warblers, and lesser goldfinches. The patches of willows along the river provide cover for black-tailed deer.

Sand Bars

Sand bars occur along the banks of the American River, where frequent scouring results in a substrate of sand or gravel that is mostly devoid of vegetation. The sand and gravel bars along the river provide roosting and foraging sites for a variety of wildlife, including raccoons, striped skunks, weasels, spotted sandpipers, yellow-breasted chat, and killdeer, as well as Pacific chorus frogs, and western toad tadpoles in the shallow water.

Riverine

Many wildlife species use the high-quality riverine habitat for wintering, breeding, foraging, and rearing young as well as during migration. Water birds, such as common mergansers, killdeer, spotted sandpipers, and belted kingfishers, breed and rear their young along the river. Aerial feeding birds, such as tree swallows, violet-green swallows, barn swallows, cliff swallows, and black phoebes, feed on insects over the water during the spring, summer, and early fall. During the winter months, common mergansers, common goldeneyes, ospreys, and belted kingfishers, forage and roost along the river.

Special-Status Resources

Federal Threatened or Endangered Species

Valley Elderberry Longhorn Beetle (VELB) is the only federally listed species known to occur in the Mammoth Bar OHVA. Presence of the species is based on two elderberry shrubs in the existing park area; the elderberry is the host plant of the VELB (Jones & Stokes 2000). Section 9 of the Endangered Species Act prohibits activities that result in "take" of listed species. Take is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct". The term harm includes adverse impacts on habitat.

Existing trails near the elderberry shrub and down to the river will be closed, habitat restored, and surveys will be completed to ensure that trails are located at least 20 feet from the outer canopy of any elderberry shrub. All field staff will be trained in the identification of the shrub. The condition of all elderberry plants will be surveyed each year. Condition will describe the approximate size of the shrubs, presence of exit holes potentially used by VELB, and a qualitative comparison to the previous year's condition. The Resource Ecologist will work to ensure the survival of the current shrubs and create conditions to allow the germination and growth of new shrubs.

State Threatened or Endangered Species

No state-listed wildlife species currently occur at Mammoth Bar OHVA.

Fully Protected Species

The ringtail is a fully protected species (California Fish and Game Code Section 4700). The Department of Fish and Game may not issue a permit that authorizes "take" of fully protected species, except for scientific research. Take is defined as "an action to or attempt to hunt, pursue, catch, capture, or kill" (CFGC Section 86). Because this definition does not include harm or harass, habitat modification is not prohibited.

There have been no reported incidents of fatal accidents to ringtails in the project area. It is unlikely that OHV traffic would result in direct mortality of a ringtail because ringtails are active at night when the park is closed to OHV activity. Surveys will be conducted to determine the presence or absence of this species.

Other Special-Status Species

Yellow-breasted chats were observed on the south side of the middle fork of the American river. Riparian areas adjacent to this location will be enhanced through plantings. In addition, riparian areas through out the OHVA will be enhanced with plantings to encourage more continuous stands. In addition, impacts will be minimized because OHV recreation will be prohibited in riparian vegetation along the American River by closing three spur trails.

Yellow-legged frog occur in riverine and riparian habitats. Surveys will be conducted to determine the presence or absence of this species.

Pale Townsend's big-eared bat and small-footed myotis bat. There is only a low probability that the pale Townsend's big-eared bat and the small-footed myotis bat occur in the project area because of the lack of suitable roosting habitat (Jones and Stokes 2000). No bat roosts were found during the initial field survey, although an intensive survey was not conducted. An intensive survey will be conducted in the future by contracted specialists.

Monitoring

The goal of monitoring is to detect changes in species and/or communities over time. One may monitor a single species not only to detect changes in that species, but also as an indicator of ecological health. Groups of species (e.g. songbirds), may also serve as good indicators of habitat quality and health (e.g. riparian habitat). Monitoring strategies will be implemented to both detect changes in particular species and to evaluate ecological health.

Wildlife Monitoring System

This system will monitor mammals, birds, reptiles, and amphibians using the most current protocols throughout varied habitats found at Mammoth Bar. The biological species inventory list will be updated annually. The Resource Ecologist will conduct surveys for the federally listed valley elderberry longhorn beetle, and the special-status species, ringtail, yellow-breasted chat, yellow-legged frog, pale Townsend's big-eared bat, and small-footed myotis, to assist in prescribing proper management for perpetuation of these species. Potential impacts on these species will be evaluated each year. If a Threatened or Endangered species is located within the OHVA, or if one of the above mentioned Species of Special Concern is upgraded to Threatened or Endangered, a management/protection plan for that specific species will be formulated between a multi-agency project. The monitoring program will remain in place indefinitely in order to determine long-term trends in habitat health within the OHVA.

Techniques for monitoring wildlife will include; pitfall traps, cover boards, or time-constrained searches for herptiles, night spotlight surveys, pellet plots, or sooted track plates for large mammals, variable circular plots for birds, and Sherman live traps for small mammals.

Bird Sampling Protocol

Common species of birds are abundant and diverse in the area, and may be more sensitive to disturbance by OHVs than mammals (Jones and Stokes 2000). Therefore, point counts or line transects will be conducted twice a year in the fall (migration) and spring (breeding) when birds are most active. All sampling should be conducted between the hours just prior to sunrise through mid-day, from approximately 6:00 a.m. to 12:00 p.m.. Every attempt will be made to locate and monitor all raptor nests (i.e., burrows) and perching locations within the OHVA.

Variable-circular plot

In each plot, a 0.5 km long transect is walked, using the variable-circular plot method (Reynolds et al. 1980). Five station points, approximately 50 m apart, are established along this transect, from which the observer listens and watches for bird activity for a period of ten minutes. Each individual sighting or vocalization is recorded by noting species and distance in meters to its location, from the station point. Any birds flushed or heard during transit from one station to the next are recorded with distances measured from the upcoming station. The transect starting point is located at the center stake of the sampling plot, with the direction of the transect decided upon the observer. This technique will determine species compositions, density, and diversity.

Reptile and Amphibian Sampling Protocols

Amphibian and reptile surveys are typically conducted every year in early spring or during the peak condition or activity period (i.e. late winter and early spring for amphibians and summer months for reptiles).

Time-constrained Searches

In each of the animal sampling plots, permanent 200 m long, 15 m wide belt transects will be established for reptile and amphibian sampling. These transects begin at the center post in each plot and run in the four cardinal directions (i.e., north, south, east, west). Amphibians and reptiles are sampled by time-constrained searches of these transects. Each transect is searched by one observer for 20 minutes, turning over small rocks, logs, and other debris, concentrating the search around the bases of shrubs and trees. Animals caught or seen are identified and recorded, and when possible, their sex is determined. The plots are surveyed once in the morning at approximately 8:00 a.m., and one in the afternoon, at approximately 3:00 p.m..

Pit-fall Traps

Permanent pit-fall traps will be installed at plots located in areas of steep topography which does not lend itself to the use of long transects, as well as plots along grassland areas where observations of reptiles is extremely difficult. The traps consist of three 5 m drift fences connected in the center and separated by approximately 120 degrees. Each drift fence has a pit-fall trap at the end and one in the center where the three drift fences meet for a total of four traps per site. Five-gallon buckets serve as the pit-fall traps and are buried flush with the ground. These traps are opened for a 24-hour period and checked twice a day for the five day survey, then closed and buried for the remainder year.

Small Mammal Protocols

Surveys are usually conducted in the spring months every two years. Live trapping is utilized to assess diversity and abundance of small mammal species on the study plots. The information gained from monitoring rodents and small mammals is valuable for understanding the abundance of larger predators and raptors. On each plot, 50 Sherman live-traps are set out in two roughly parallel transects of 25 traps per transect with a 10 m interval between trap stations. Traps are baited with mixed birdseed and set late in the afternoon. They are checked shortly after sunrise the next morning, and closed for the remainder of the day to avoid trap mortality for any diurnal species that may be present. This protocol is followed for three consecutive nights for each of the study plots. Captured animals are identified, measured, checked for reproductive condition, hair-clipped, and released.

Large Mammal Protocols

Large Mammals will be surveyed annually by night spotlighting (Kutilek et al. 1991). Routes designated will encompass all habitat types. The survey will be conducted on three consecutive nights in June. Night spotlighting is carried out beginning one hour after dark from a 4-wheel drive truck driven at 5 to 8 miles per hour (mph). Two observers stand in the bed of the truck, sweep the surrounding area with 400,000 candle power spotlights, and record all animals observed.

Habitat Monitoring System

Monitoring will assess changes in plant species composition and vegetation cover, and provide information for management in the future. An Annual Habitat Monitoring Report will be produced each year. The summary of the habitat conditions from the field data will indicate the health of the vegetation. These indices will be compared to previous years in order to determine trends in habitat health. Specialized habitats that have been designated as Sensitive Areas will be monitored for vegetation degradation. These areas will receive special protection in controlling use patterns and therefore reducing recreational impacts. Patrols are available daily to enforce regulations, and trails are temporarily closed during wet weather to prevent trail damage and reduce soil erosion.

Six major habitat types were identified at Mammoth Bar OHVA: blue oak/foothill pine, annual grassland, chaparral, valley and foothill riparian, sand bar, and riverine. The sensitive biological communities at the site include valley and foothill riparian woodland, seasonal wetland, and seasonal drainage. No special-status plants were observed in the area. The elderberry shrub, which occurs in the Mammoth Bar OHVA, is the host plant for the valley elderberry longhorn beetle. To protect both shrub and beetle from removal and dust, trails near the shrub will be closed or rerouted at least 20 feet from the shrubs.

Techniques for monitoring wildlife habitats will include, line transects, aerial photography, or remote sensing. Smaller scale monitoring of vegetation may be conducted by resampling some of the plots that were surveyed for the initial inventory. This type of field monitoring provides information about changes in cover and diversity of undergrowth species. Vegetation sampling may be conducted in the spring of each year when herbaceous undergrowth species are most likely to be growing.

Vegetation Sampling Protocol

The California Native Plant Society's (CNPS) vegetation sampling protocol is widely accepted and used by many agencies and groups. Its advantages are its accuracy, easy replication, and time efficiency. All vegetation sampling should be conducted each spring.

Point-intercept transect: A 50 m long tape is laid along the center of the plot and secured at both ends. The observer uses a 1m length of steel roundbar to sight along a vertical line at 0.5 m intervals from 0.5 m to the 50 m mark. Each species intercepted by the vertical line is tallied by vegetation layer. A total of 100 points along the transect are thus sampled.

Photo Monitoring

In addition to the direct animal and vegetation monitoring, various photographic monitoring surveys shall be carried out. Every three years, aerial photos will be taken of the entire recreation area and biannually a ground-based photo monitoring survey is conducted at ten, high visitor use locations, throughout the area. This would be a valuable tool for monitoring changes in vegetation cover over time.

Wetlands and Riparian Vegetation Monitoring

There are no OHV trails in the small wetlands in the grasslands habitat. OHV recreation will be prohibited in riparian vegetation along the American River by closing three spur trails in the existing OHV area. The Department of Parks and Recreation will confer with the Department of Fish and Game regarding any needed 1601 related actions for streams in the Mammoth Bar OHVA. The Resource Ecologist will plant appropriate trees and shrubs, such as willows and cottonwood, in the riparian corridor. Newly planted areas should be temporarily fenced or newly planted trees and shrubs should be covered with protective sleeves until trees and shrubs become established.

Prescribed Burning

Prescribed burning is proposed for three areas to reduce fuel loads and minimize the spread and intensity of wild land fire. The burns are expected to shift dominant vegetative cover in the treated areas from dense woody shrub to annual and perennial grasses and forbes which will increase biological diversity, but could harm special-status plants, an environmental review of impact will follow. As a precaution, however, Mammoth Bar OHVA should avoid conducting prescribed burns during the flowering period for these species.

Exotic Species

Yellow Star Thistle is an invasive non-native plant that has spread throughout the West. Because it forms a mono culture and provides little to no habitat value for wildlife, it is causing problems to many land managers and eradication programs have begun. At Mammoth Bar, prescribed burns take out part of the invasive plant. In the staging area at the OHV park, staff and CDF con crews cut back thistle prior to flowering to minimize the spread of seed to trails. An integrated yellow star thistle eradication program will be developed and carried out by the Department of Parks and Recreation.

Soils Monitoring System

The erosive soils within Mammoth Bar closely link habitat protection to soil conservation and erosion control. A document titled the "Soil Conservation Guidelines and Standards for Off-Highway Vehicle Recreation Management" was approved in 1991. The standards and procedures of this document are, and will continue to be implemented at Mammoth Bar OHVA. The trail system is inventoried monthly to check for trouble spots. OHV riding is restricted to established and designated trails to reduce disturbance to natural resources. Trails are closed temporarily during wet weather to prevent damage and reduce soil erosion. The Mammoth Bar equipment operator currently devotes two days a week on trail rehabilitation. There are currently about 14 miles of designated OHV trails. There will be a carrying capacity of 140 riders at any one time, once that limit is reached, the park will be closed to OHV riders until the number of riders in the park drops below 140. The current management plan will review that number annually as monitoring continues.

The OHMVRD adopted a generic soil loss standard that states: "Off-highway motor vehicle areas and trails will be maintained in a condition that will allow for feasible rehabilitation by natural resource managers" (California Department of Parks and Recreation 1991). The proposed soil loss monitoring procedures for the Mammoth Bar OHVA is based on an assessment of revegetation potential, as defined in the PRC("…restoration of…plant communities, and the plant covers comparable to those on surrounding lands or at least those which existed prior to off-highway motor vehicle use." Section 5090.11). The following describes the steps to be used in the assessment.

- A DPR resource specialist will train staff to conduct trail condition surveys. The staff will be trained to identify different types of erosion, map them, and fill out standardized data sheets.

- Staff will inventory trails and map eroded/unvegetated areas. Features to be mapped include depths of incision/gully erosion within trail treads; sheet, rill, gully, and mass movement erosion of cut and fill slopes and other use areas; incision and headcutting of drainage ways receiving runoff from trails and other use areas; and other use-related erosion areas.

- A DPR resource specialist will review the data collected by staff to determine which trail segments or erosion sites should be inspected in the field. Following the field evaluation, the erosion features will be prioritized for treatment. The priorities will be based on the severity of the erosion feature, cost, and the risk to other sensitive resources. The severity of the erosion feature will be rated considering the type (rill, sheet, sully, or mass movement) and extent (length, depth, width). The cost of rehabilitation increases geometrically as the severity of erosion feature increases. The risk will consider impacts on other sensitive resources (i.e., water quality, endangered species habitat) public safety, and the presence of material high erosion hazards that will exacerbate an existing problem.

- The list of priorities will be reviewed by the Division Management Team and submitted for funding.

Soil Loss Monitoring Schedule

Soil loss Monitoring at Mammoth Bar OHVA will be conducted between September 1 and October 30 each year. The assessment will be completed by November 30 of each year.

Non-Attainment of Soil Loss Standard

In the event of non-attainment of the soil loss standard in a given part/segment of a recreation area, that part/segment will be temporarily closed and repaired to prevent accelerated erosion until it is capable of meeting the standard (California Department of Parks and Recreation 1991).

If it is determined that the soil loss standard and habitat protection plans are not being met in an area, the department shall direct the division to close the area and rehabilitate the area where it is feasible.

Annual Report

An annual report will contain the results from monitoring for that year compared to the results from previous years. An interpretation of any apparent year to year changes will be provided as well as management programs needed for mitigation (e.g., closure of areas, rerouting of traffic, revegetation, etc.). The annual report will also contain a synopsis of all projects and inventories accomplished that year that aid in the fulfillment of the Wildlife Habitat Protection Plan

Contacts and Resources

Bats: Besty Bolster California Department of Fish and Game 1416 Ninth St. Sacramento, 916-654-3806.

VELB: Becky Miller California Department of Fish and Game 1416 Ninth St. Sacramento, 916-322-9092.

Ringtail: Gordon Gould California Department of Fish and Game 1416 Ninth St. Sacramento, 916-651-6389.

Valley Elderberry Longhorn Beetle Recovery Plan: U.S. Fish and Wildlife Service, 1984, Portland, Oregon.

Soils: Cliff Heitz, District Conservationist, Natural Resource Conservation Service, Placer County, Auburn, CA, 530-823-6830

Habitat Monitoring System: The California Department of Parks and Recreation OHMVRD, April 1999

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